

Figure 1

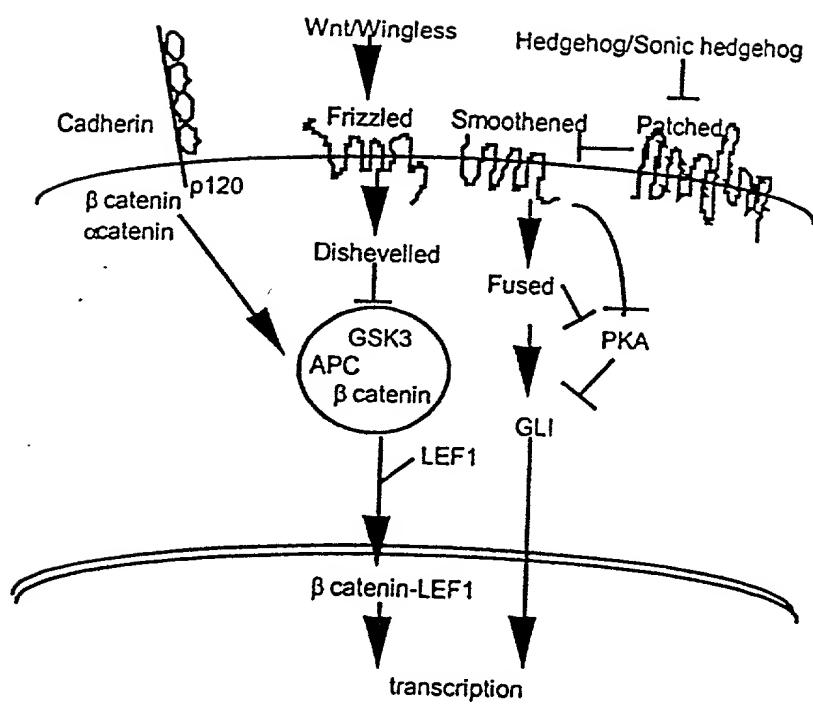


Figure 2a

## Alignment of several frizzled family members

Figure 2b

amino terminal domain continued

**fz3/mouse**  
**fz4/mouse**  
**fz8/mouse**  
**fz5/human**  
**fzd9/human**  
**fz1/rat**  
**fz2/rat**  
**fz/Dros**  
**fz2/Dros/**

YSFLHVRDCSPPCPN-----MYFRREELS FARYFIGLISIICL SATLFTFLTFLIDVTR  
 --LNCV LKCGYDAG-----LYSRSAKEFTDIWMAVWASLCFISTTFTVLTFLIDSSR  
 -KTGQIANCALPCHN-----PFFSQDERAFTVFWIGLWSVLCFVSTFATVSTFLIDMER  
 -RTGQVPNCAPCYQ-----PSFSADERTFATFWIGLWSVLCFISTSTTVATFLIDMDT  
 --RSCAPRCGPVGVEV-----FWSRRDKDFALVWMAVWSALCFFSTAFTVLTFLLEPHR  
 LGEK---DCGAPCEPTK VYGLMYFGPEELRFSRTWIGIWSVLC CASTLFTVLTFLIDSSR  
 LGER---DCAAPCEPARPDGSMFFSHHHTRFARLWILTVS VLCCASTFFFVTTSLVAMQR  
 VGGKDLHDCGAPCH-----AMFFPERERTV LRYWVG SWAACV ASCLFTVLTFLIDSSR  
 QRIAGVPNCGIPCKG-----PFFSNDEKDFAGLWIALWSGLCFCSTLMTTFLIDTER  
 \* : : \* : : \*

**fz3/mouse**  
**fz4/mouse**  
**fz8/mouse**  
**fz5/human**  
**fzd9/human**  
**fz1/rat**  
**fz2/rat**  
**fz/Dros**  
**fz2/Dros/**

FRYPERPII FYAVCYMMVSLIFF FIGFLLE-DRVACNASSP-----  
 FSYPERPII FLSMCY NIYSIAYIVRLTVGRERISCDF-----  
 FKYPERPII FLSAC YLFVSGYLVRLVAGHEKVACSGGAPGAGGRGGAGGAAAAGAGAAG  
 FRYPERPII FLSAC YLCVSLGFLVRLVVGHASVACS-----  
 FQYPERPII FLSMCY NVYSLAFLIRAVAGAQS VACD-----  
 FSYPERPII FLSG CYTAVAVAYIAGFLLE-DRVVCNDKFAE-----  
 FRYPERPII FLSG CYTMVSVAYIAGFLQ-ERVVCNERFSE-----  
 FRYPERAIVFLAVCYLVVGCAVAGL GAG-DSVSCREPFPVVK---LG-----  
 FKYPERPIVFLSAC YFMVAVGYLSRNFLQNEEIA CDG-----  
 \* \* \* \* . : \* . \* : \*

**fz3/mouse**  
**fz4/mouse**  
**fz8/mouse**  
**fz5/human**  
**fzd9/human**  
**fz1/rat**  
**fz2/rat**  
**fz/Dros**  
**fz2/Dros/**

-----AQYKASTVTQGSHNK-ACTMLFMVLYFFT MAGSVWWVILTTWFLA  
 -----EEAAEPVLIQEGLKNTGCAIIFL LMYFFGMASSIWWVILTL TWFLA  
 RGASSPGARGEYEELGAVEQH VRYETTG PALCTV VFL LYYFGMASS LWWV VLT LTWFLA  
 R-----EHNHIHYETTG PALCTIV FLLV YFFGMASS IWWV ILSLTWFLA  
 -----QEAGALYVIQEGLEN T GCTL VFL LYYFGMASS LWWV VLT LTWFLA  
 -----DGARTVAQGT KKE-GCTILFMM LYFFSMASS IWWV ILSLTWFLA  
 -----DGYRTVGQGT KKE-GCTILFMM LYFFSMASS IWWV ILSLTWFLA  
 -----RLQMMSTITQGH RQTT SCTL VFL M ALYFCCMAAFAWW SCLAF AFWFLA  
 -----LLLRESSTGPHSCTL VFL LTYFFGMASS IWWV ILTFTWFLA  
 \* : : : : \* : : : : \* : : : : \* : : : : \*

**fz3/mouse**  
**fz4/mouse**  
**fz8/mouse**  
**fz5/human**  
**fzd9/human**  
**fz1/rat**  
**fz2/rat**  
**fz/Dros**  
**fz2/Dros/**

AVPKWGSEAIEKKALLFHASAWGIPGTLTIILLAMNKIEGDNISGVCFVGLYD VD ALRYF  
 AGLKWGHEAIEMHSSYF HIAAWAI PAVKTIVI LIMRLVDAE LTGLCYVG NQNL DAL TGF  
 AGMKWGNEAIAGY SQYF HLA AWL VPSVKSIAV LAL SSVDGDPVAG ICYVG NQSL DNL RGF  
 AAMKWGNEAIAGY GQYF HLA AWL VPSVKSIT A LAL SSVDGDPVAG ICYVG NQNL NSL RGF  
 AGKKWGHEAI EAHGSYF HMAA WGLPALKTIVI LTRK VAGD E LTGLCYV A STDAA AL TGF  
 AGMKWGHEAI EANSQYF HLA AWAVPAIKTITI LAL GQV DGVLSGVCFVGLNNV D AL RGF  
 AGMKWG HAAI EANSQYF HLA AWAVPAVKTITI LAMG QIDG DLSGVCFVGLNRLDPL RGF  
 AGLKWGHEAIENKSHLFH LVA WA VPA LQTI SVL A LAKVEG DILSGVCFVG QL DTHS LGA F  
 AGLKWGNEAI TKHSQYF HLA AWL I PTVQ SVA VLL SAVDGD P I L G I CYVG NLPD HLKTF  
 : \* \* . \* : . \* \* \* \* : \* : : : : \* : : \*

Figure 2c

Figure 3

Sequence alignment of a portion of the aminoterminal extracellular region of human  
Frizzled receptors

HFZ1	VGQNTSDKGT---PSLLPEFWTSNPQHGGGGHRG-----	GFPGGAG---ASERGKFSCP-----R
HFZ2	VGQNHSEDGA----PALLTAPPPGLQPGAGGTG-----	GPGGGGAPPRYATLEHPFHC-----R
HFZ3	LVDLNLAG----EPTEGAPV-----	AVQRDYG-----FWC-----R
HFZ4	CMEGPGD----EE-----	VPLPHKTPI-----QP-----R
HFZ5	CMDYNRSEATTAPPRPFPACKTLPG-----PPGA-----	PASGG-----ECPAGGPVF-----CKC-----R
HFZ6	TFDPHTEF----LGPQKKTE-----	QVQRDIG-----FWC-----R
HFZ7	VGQNTSDGSGGPGGGPTAYPTAPYLPDLPFTALPPG-----	ASDGRGRPAF-----PFSC-----R
HFZ8	CMDYNRTDLTTAAPSPPRLLPPPPP-GEQPPSGSGHGRPPGARPPHRRGGRRGGGGDAAAPPARGGGGGKARPPGGGAAP---CEPGCQC-----R	
HFZ9	CMEAPENA-TAGPAEPHKGLGMLPV-----	APRPARPPG-----DLGP-----R
HFZ10	NYLCMEAPNN---GSDEPTRGSGLFPP-----	LFRPQRPHSAQ-----EHP-----R

Figure 4

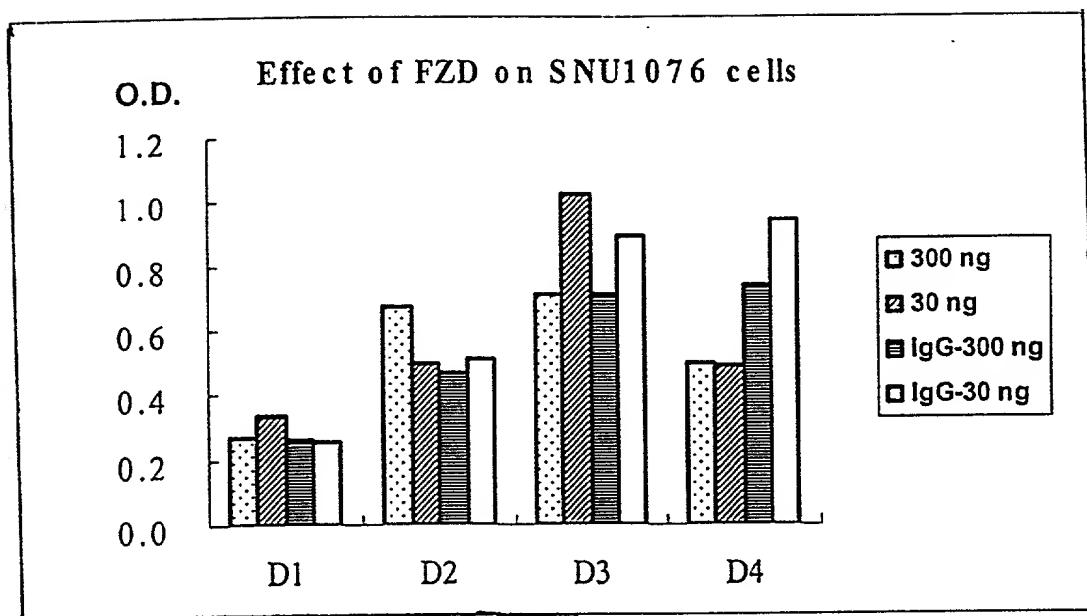


Figure 5

Effect of antibodies SNU 1076 Cells

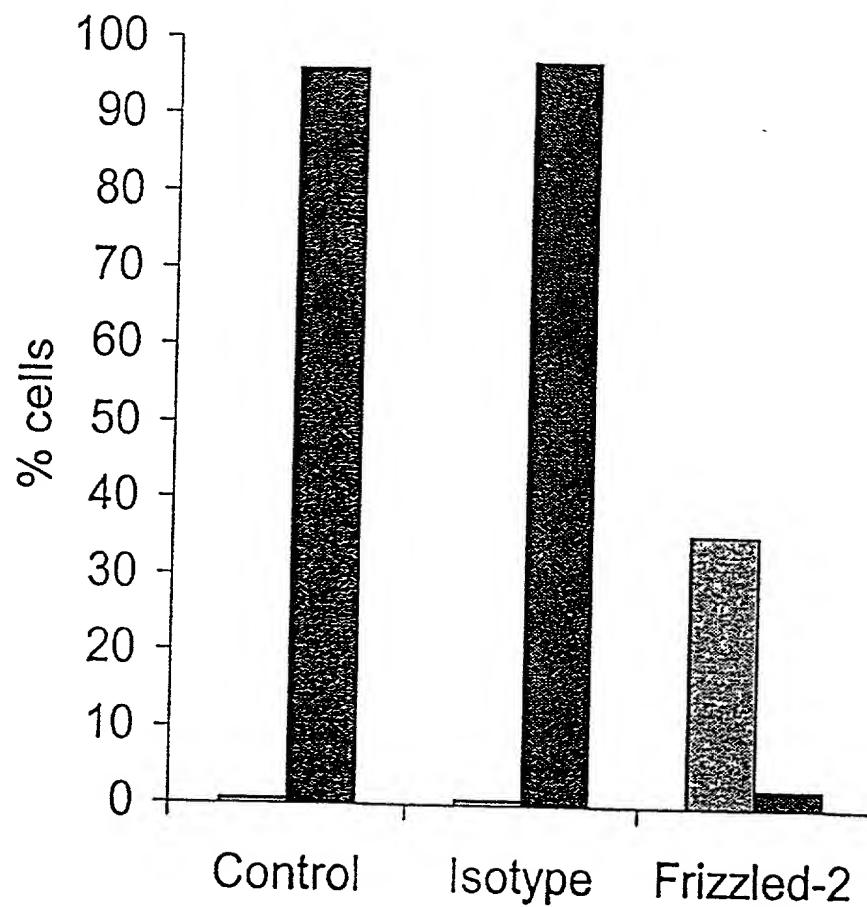


Figure 6

Effect of antibodies on SNU 1076 cells

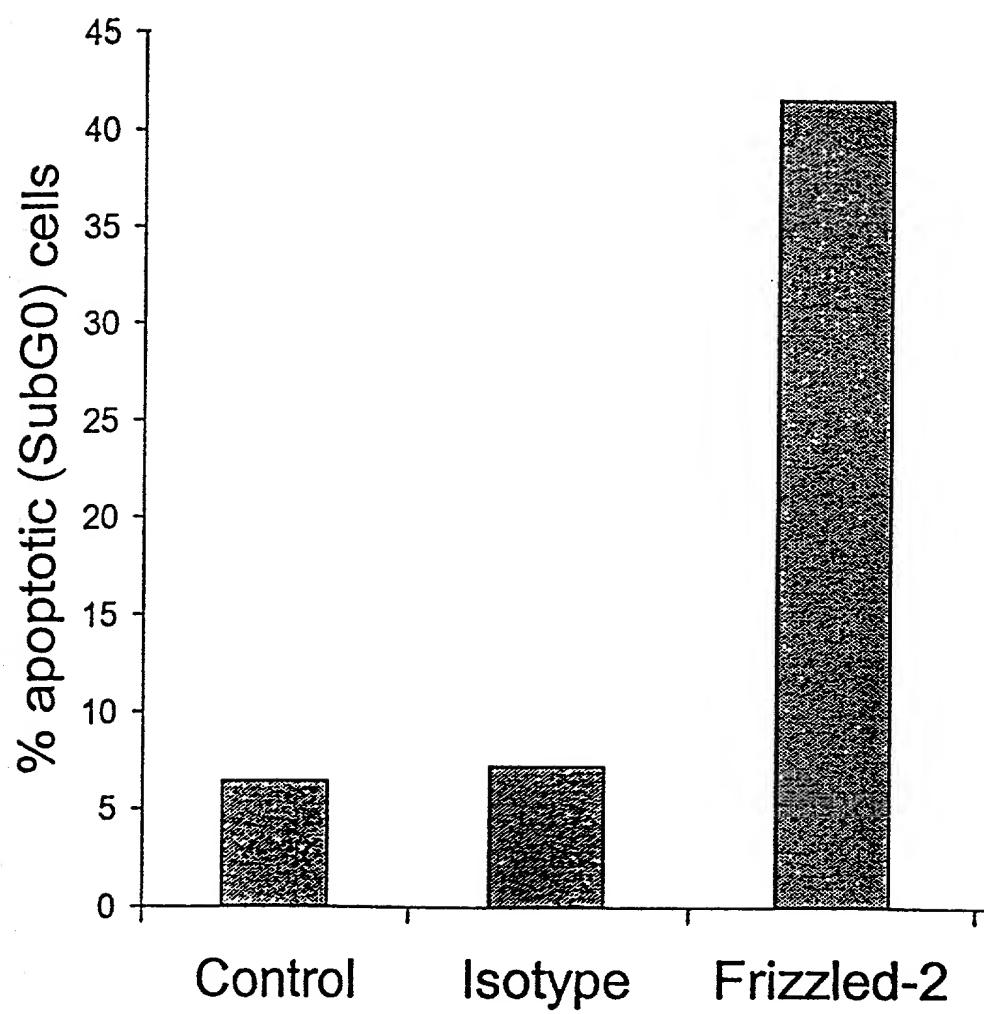
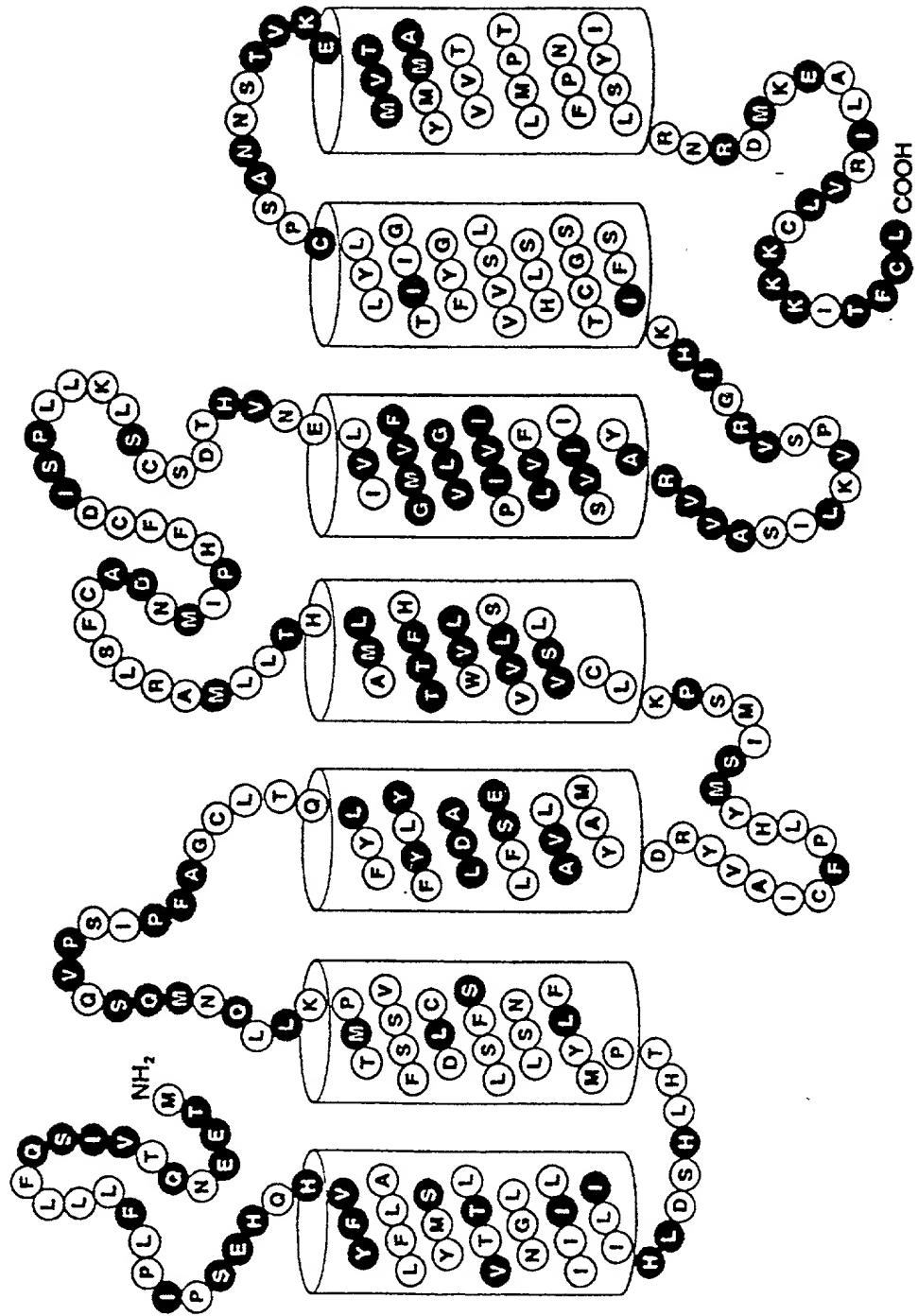


Figure 7



Graphical representation of an olfactory protein showing aminoterminal and three extracellular domain loops (from PCT WO 92/17585)

Figure 8a

→ amino terminal domain

HFZ1	MAEEEAPKKSRAAGGGASWELCAGALSARLAEGSGDAGGRRPPVDPRLARQLLLLLW
MFZ1	MAEEAAPSRESRAAGR-LSLELCAEALPGRREEVGHEDTASHRRPRADPWRWASGLLLLW
HFZ2	-----MRPRSLAPRLLLPLL
HFZ3	-----MAMTWIVFSLWPLTV
MFZ3	-----MAVSWIVFDLWLLTV
HFZ4	-----MAWRGAGPSVPGAPGGVGLSLGLLQ
MFZ4	-----MAWPCTGPSSRGAPGGVGLRLGLLQ
HFZ5	-----MARPDPSAPPSSL--LLL
MFZ5	-----MEMFTFLTCI
HFZ6	-----MERSPFLLACI
MFZ6	-----MRDPGAAAPLSSLGLCALVLA
HFZ7	-----MRGPGTAASHSPLGLCALVLA
MFZ7	-----MEWGYLLEVTSILLAALAL
HFZ8	-----MEWGYLLEVTSILLAALAV
MFZ8	-----MAVAPL-RGALLLWQLLA
HFZ9	-----MAVPPLLRGALLLWQLLA
MFZ9	-----MQRPGPRLWLVLQ
HFZ10	-----

HFZ1	LLEAPLLLGVRAQAAGQGPGQGPQGPQQPPPPQQQQSGQQYNGERGISVPDHGQCQPI
MFZ1	LLEAPLLLGVRAQAAGQVSG---PGQQAPPQPPQQQSGQQYNGERGISIPDHGQCQPI
HFZ2	LLPA-----A-----GPAQFHGEKGISIPDHGFCQPI
HFZ3	FMGHI-----GGHSLFS-----CEPIT
MFZ3	FLGQI-----GGHSLFS-----CEPIT
HFZ4	LLLLLG-----PARGFGDEEE-----RRCDPIR
MFZ4	FLLLR-----PTLGFGDEEE-----RRCDPIR
HFZ5	LAQLVG-----RAAAASKAPV-----CQEIT
HFZ6	FLPLL-----RGHSLFT-----CEPIT
MFZ6	LLPLV-----RGHSLFT-----CEPIT
HFZ7	LLGAL-----SAGAGAQPYHGEKGISVPDHGFCQPI
MFZ7	LLGAL-----PTDTRAQPYHGEKGISVPDHGFCQPI
HFZ8	LQRSSG-----AAAASAKELA-----CQEIT
MFZ8	LQRSSG-----AAAASAKELA-----CQEIT
HFZ9	AGGAAL-----EIGRFDPERGR---GAAPCQAVE
MFZ9	TGGAAL-----EIGRFDPERGR---GPAPCQAME
HFZ10	VMGSCA-----AISSMDMERP---GDGKCQPIE

\* : -

HFZ1	IPLCTDIAYNQTIMPNLGHTNQEDAGLEVHQFYPLVKVQCSAELKFFLCSMYAPVCT-V
MFZ1	IPLCTDMAYNQTIMPNLGHTNQEDAGLEVHQFYPLVKVQCSAELKFFLCSMYAPVCT-V
HFZ2	IPLCTDIAYNQTIMPNLGHTNQEDAGLEVHQFYPLVKVQCSPELRRFLCSMYAPVCT-V
HFZ3	LRMCQDLPYNTTFMPNLLNHYDQQTAAALAMEPFHPMVNLDCSRDFPFLCALYAPICM-E
MFZ3	LRMCQDLPYNTTFMPNLLNHYDQQTAAALAMEPFHPMVNLDCSRDFPFLCALYAPICM-E
HFZ4	ISMCQNLGYNTKMPNVLGHELQTDAELQLTTFTPLIQQGCSQLQFFLCSVYVPMCTEK
MFZ4	IAMCQNLGYNTKMPNVLGHELQTDAELQLTTFTPLIQQGCSQLQFFLCSVYVPMCTEK
HFZ5	VPMCRGIGYNLTMPNQFNHDTQDEAGLEVHQFWPLVEIQCSPDLRFFLCTMYTPICLPD
HFZ6	VPRCMKMAYNMTFFPNLMGHYDQSIAAVEMEHLPLANLECSPIETFLCKAFVPTCI-E
MFZ6	VPRCMKMTYNMTFFPNLMGHYDQGIAAVEMGHFLHLANLECSPIEMFLCQAFIPTCT-E
HFZ7	IPLCTDIAYNQTILPNLLGHTNQEDAGLEVHQFYPLVKVQCSPELRRFLCSMYAPVCT-V
MFZ7	IPLCTDIAYNQTILPNLLGHTNQEDAGLEVHQFYPLVKVQCSPELRRFLCSMYAPVCT-V
HFZ8	VPLCKGIGYNYTYPNQFNHDTQDEAGLEVHQFWPLVEIQCSPDLKFFLCSMYTPICLED
MFZ8	VPLCKGIGYNYTYPNQFNHDTQDEAGLEVHQFWPLVEIQCSPDLKFFLCSMYTPICLED

Figure 8b

Figure 8c

←  
RFSRTWIGIWSVLCCASTLFTVLTYLVDMRRFSYPERPIIFLSCGYTAVAVAYIAGFLLERFSRTWIGIWSVLCCASTLFTVLTYLVDMPRFSYPERPIISLSCGYTAVAVAYIAGFLLERFARLWILTWVLCCASTFFTFTVTTVLVDMQRFRYPERPIIFLSCGYTMVSVAYIAGFVLQSFARYFIGLISIICLSATLFTFLTFLIDVTRFRYPERPIIFYAVCYMMVSЛИFFIGFLLESFARYFIGLISIICLSATLFTFLTFLIDVTRFRYPERPIIFYAVCYMMVSЛИFFIGFLLEEFTDIWMAVWASLCFISTAFFTFLIDSSRFSYPERPIIFLSCMCYNIYSTIAYIVRLTVGEFTDIWMAVWASLCFISTTFTVLFLIDSSRFSYPERPIIFLSCMCYNIYSTIAYIVRLTVGTFATFWIGLWSVLCFISTSTTVATFLIDMDTFRYPERPIIFLSCACYLCVSLGFLVRLVVGЕFAKSFIGTVSIFCLCATLFTFLTFLIDVRRFRYPERPIIYYSCVSCIVSLMYFIGFLLGDFAKSFIGIVSIFCLCATLFTFLTFLIDVRRFRYPERPIIYYSCVSCIVSLMYFVGFLLGRFARLWVGWVWSVLCCASTLFTVLTYLVDMRRFSYPERPIIFLSCGYFMVAVAVAGFLLERFARLWVGWVWSVLSCASTLFTVLTYLVDMRRFSYPERPIIFLSCGYFMVAVAVAGFLLEAFTFWIGLWSVLCFVSTFATVSTFLIDMERFKYPERPIIFLSCACYLFVSVGYLVRVLVAGAFTFWIGLWSVLCFVSTFATVSTFLIDMERFKYPERPIIFLSCACYLFVSVGYLVRVLVAGDFALVWMAVWSALCFSTAFFTFLTFLLEPHRFQYPERPIIFLSCMCYNVSYSLAFLIRAVAGDFALVWMAVWSALCFSTAFFTFLTFLLEPHRFQYPERPIIFLSCMCYNVSYSLAFLIRAVAGRFAVVWLAIWAVLCCFFSAFTVLFLIDPARFRYPERPIIFLSCMCYCVSVGYLIRLFAG

→ extracellular domain loop 1

HFZ1	DRVVCNDK-----	FAEDGARTVAQGTTK
MFZ1	DRVVCNDK-----	FAEDGARTVAQGTTNK
HFZ2	ERVVCNER-----	FSEDGYRTVQGTTK
HFZ3	DRVACNAS-----	I-PAQYKASTVTQGSHN
MFZ3	DRVACNAS-----	S-PAQYKASTVTQGSHN
HFZ4	RERISCDF-----	EEAAEPVLIQEGLKN
MFZ4	RERISCDF-----	EEAAEPVLIQEGLKN
HFZ5	HASVACS-----RE	HNHIIHYETTGP
HFZ6	DSTACNKA-----D	EKLELGDTVVLLGSQN
MFZ6	NSTACNKA-----D	EKLELGDVVLLGSKN
HFZ7	DRAVCVER-----	FSDDGYRTVAQGTTK
MFZ7	DRAVCVER-----	FSDDGYRTVAQGTTK
HFZ8	HEKVACSGGAPGAGGAGGAGGAAA-GAGAAGAGAGGPGGRGEYEELGAVEQHVRYETTGP	
MFZ8	HEKVACSGGAPGAGGRGGAGGAAAAGAGAAGRGASSPGARGEYEELGAVEQHVRYETTGP	
HFZ9	AQSVACD-----	QEAGALYVIQEGLEN
MFZ9	AQSVACD-----	QEAGALYVIQEGLEN
HFZ10	AESIACD-----	RDSGQLYVIQEGLES

EGCTILFMMLYFFSMASSIWWVILSLTWFLAAGMKWGHEAIEANSQYFHLLAAWAVPAIKT  
EGCTILFMMLYFFSMASSIWWVILSLTWFLAAGMKWGHEAIEANSQYFHLLAAWAVPAIKT  
EGCTILFMMLYFFSMASSIWWVILSLTWFLAAGMKWGHEAIEANSQYFHLLAAWAVPAIKT  
EGCTILFMMLYFFSMASSIWWVILSLTWFLAAGMKWGHEAIEANSQYFHLLAAWAVPAVKT  
KACTMLFMILYFFTMAGSVWWVILTTWFLAAVPKWGSEAIKKALLFHASAWGIPGTLT  
KACTMLFMVLYFFTMAGSVWWVILTTWFLAAVPKWGSEAIKKALLFHASAWGIPGTLT  
TGCAIIFLMLYFFGMASSIWWVILTLTWFLAAGLKWGHEAIEMHSSYFHIAAWAIPAVKT  
TGCAIIFLMLYFFGMASSIWWVILTLTWFLAAGLKWGHEAIEMHSSYFHIAAWAIPAVKT  
ALCTIVFLLVYFFGMASSIWWVILSLTWFLAAMKGNEAIAGYQYFHLLAAWLIPSVKS  
KACTVLFMILYFFTMAGTVWWVILTTWFLAAGRKSCEAIEQKAVWFHAVAAGTPGFLT  
KACSVVFMFLYFFTMAGTVWWVILTTWFLAAGRKSCEAIEQKAVWFHAVAAGAPGFLT  
EGCTILFMVLYFFGMASSIWWVILSLTWFLAAGMKWGHEAIEANSQYFHLLAAWAVPAVKT  
EGCTILFMVLYFFGMASSIWWVILSLTWFLAAGMKWGHEAIEANSQYFHLLAAWAVPAVKT  
ALCTVVFLVYFFGMASSIWWVILSLTWFLAAGMKWGNEAIAGYSQYFHLLAAWLIPSVKS  
ALCTVVFLVYFFGMASSIWWVILSLTWFLAAGMKWGNEAIAGYSQYFHLLAAWLIPSVKS  
TGCTLVFLYYFGMASSLWWVLTLTWFLAAGKKWGHEAIEAHGSYFHMAAWGLPALKT  
TGCTLVFLYYFGMASSLWWVLTLTWFLAAGKKWGHEAIEAHGSYFHMAAWGLPALKT  
TGCTLVFLVLYYFGMASSLWWVLTLTWFLAAGKKWGHEAIEANSSSYFHLLAAWAIIPAVKT

\* :: \* : \* : \* : \* . : \* : \* : \* : \* : \* : \* : \* . \* \* . \* \* \* . \* .  
|→ extracellular domain loop 2 ←|  
ITILALGQVDGDVLSGVCFVGLNNVDALRGFVLAPLFVYLFIGTSFLLAGFVSLFRIRTI  
ITILALGQVDGDVLSGVCFVGLNNVDALRGFVLAPLFVYLFIGTSFLLAGFVSLFRIRTI  
ITILAMGQIDGDLLSGVCFVGLNSLDPLRGFVLAPLFVYLFIGTSFLLAGFVSLFRIRTI  
IILLAMNKIEGDNISGVCFVGLYDVLADALRYFVLAPLCLYVVVGVSLLLAGIISLNVRRIE  
IILLAMNKIEGDNISGVCFVGLYDVLADALRYFVLAPLCLYVVVGVSLLLAGIISLNVRRIE

Figure 8d

→ extracellular domain loop 2 ←

### → extracellular domain loop 3

←

HFZ1	AIPCPHLQAGGGAPPHPMSPDFTVFMIKYLMTLIVGITSFGFWIWSGKTLNSWRKFYTRL
MFZ1	AIPCPHLQGGGGVPPHPMSPDFTVFMIKYLMT-----LNSWRKFYTRL
HFZ2	AIPCP-----AHYTPR--MSPDFTVYMIKYLMTLIVGITSFGFWIWSGKTLNSWRKFYTRL
HFZ3	HIPCP-----YQVTQMSRPDLILFLMKYLMALIVGIPSVFWVGSKKTCFEWASFFHGR
MFZ3	HIPCP-----YQVTQMSRPDLILFLMKYLMALIVGIPSI FWVGSKKTCFEWASFFHGR
HFZ4	-----EMLKIFMSLLVGITSFGMWIWSAKTLHTWQ-KCSNR
MFZ4	-----EMLKIFMSLLVGITSFGMWIWSAKTLHTWQ-KCSNR
HFZ5	TGQPR----AK-----PEYWVLMKYFMCLVVGITSFGVWIWSGKTVESWRRFTSRC
HFZ6	HIPCP-----YQAKAKARPELALFMIKYLMTLIVGISA FWVGSKKTCTEWAGFFKRN
MFZ6	RIPCP-----YQANPKARPELALFMIKYLMTLIVGISA FWVGSKKTCTEWAGFFKRN
HFZ7	AVPCP----PGHFPPM--SPDFTVFMKYLMTMIVGITTGF WIWSGKTLQSWRRFYHRL
MFZ7	AVPCP----PRHFSPM--SPDFTVFMKYLMTMIVGITTGF WIWSGKTLQSWRRFYHRL
HFZ8	QPDQA----RR-----PDYAVFMLKYFMCLVVGITSFGVWWSGKTLESWRSLCTRC
MFZ8	QPDQA----RR-----PDYAVFMLKYFMCLVVGITSFGVWWSGKTLESWRALCTRC
HFZ9	AGPGG---RRDCSLPGGSVPTVAVFMLKIFMSL VVGITSFGVWWSKTFQTWQSLCYRK
MFZ9	TVPGG---RRDCSLPGGSVPTVAVFMLKIFMSL VVGITSFGVWWSKTFQTWQSLCYRK
HFZ10	NNOTK---TLDC-LMAASIPAVEIFMVKIFM L VVGITSFGMWIWT SKLQSWQOVC SRR

⋮ ⋮ \* ⋮ \*

HFZ1	TN--SKQGETTV-----
MFZ1	TN--SKQGETTV-----
HFZ2	TN--SRHGETTV-----
HFZ3	RKKEIVNESRQVLQEP-----DFAQSLLRDPNTPIIRKSRGTSTQGTSTHAS
MFZ3	RKKEIVNESRQVLQEP-----DFAQSLLRDPNTPIIRKSRGTSTQGTSTHAS
HFZ4	LVNSGKVKREKRGNGW-----VKPGKGSE-----
MFZ4	LVNSGKVKREKRGNGW-----VKPGKGNE-----
HFZ5	CC-RPRRGHKSGGA-----MA--AG-D-----
HFZ6	RKRDPISESRRVLQESCEFFLKHNSKVKHKKKHYKPSSHKLKVISKSMGTSTGATANHGT
MFZ6	RKRDPISESRRVLQESCEFFLKHNSKVKHKKKHYKPSSHKLKVISKSMGTSTGATANHGT

Figure 8e

HFZ7	SH--SSKGETAV-----	
MFZ7	SH--SSKGETAV-----	
HFZ8	CW-ASKGAAVGGGAGA-----	TAAGGGGGPGGGGGGGP
MFZ8	CW-ASKGAAVGAGAGG-----	SGPGGSGP-----GP
HFZ9	IA--AGRARAKACRAP-----	GSYGRGTHC-----
MFZ9	MA--AGRARAKACRTP-----	GGYGRGTHC-----
HFZ10	LKKKSRRKPASVITSG-----	GIYKKAQH-----

HFZ1	-----	
MFZ1	-----	
HFZ2	-----	
HFZ3	STQLAMVDDQRSKAGSIHSKVSSYH GSLHRSRDGRYTPCSYRG--MEERLPHGSMS-RLT	
MFZ3	STQLAMVDDQRSKAGSVHSKVSSYH GSLHRSRDGRYTPCSYRG--MEERLPHGSMS-RLT	
HFZ4	-----TVV-----	
MFZ4	-----TVV-----	
HFZ5	-----YPEASAALTGRGPPGPAATYHKQVSLSHV-----	
HFZ6	SAVAITSHDYLQETLTIQTSPETSMREVKADGASTPRLREQDCGEPAASPAAIS-RLS	
MFZ6	SAMAIADHDYLQETSTEVHTSPEASVKEGRADRANTPSAKDRDCGESAGPSSKLSGNRN	
HFZ7	-----	
MFZ7	GGGGGPGGGGGSLYSDVSTGLTWRSGTAS-SVSYPKQMPLSQV-----	
HFZ8	GGGGGHGGGGGSLYSDVSTGLTWRSGTAS-SVSYPKQMPLSQV-----	
MFZ8	-----H--YKAPTVVLHMTKTDPSLENPTHL-----	
HFZ9	-----H--YKAPTVVLHMTKTDPSLENPTHL-----	
MFZ9	-----PQKT-HHGKYEIPAQSPTCV-----	
HFZ10	-----	

HFZ1	-----	
MFZ1	-----	
HFZ2	-----	
HFZ3	DHSRHSSSHRLNEQSRHSSIRDLNNPMTITHGTSMNRIEEDGTSA-----	
MFZ3	DHSRHSSSHRLNEQSRHSSIRDLNNPMTITHGTSMNRIEEDGTSA-----	
HFZ4	-----	
MFZ4	-----	
HFZ5	-----	
HFZ6	GEQVDGKG--QAGSVSESARSEGRI SPKSDITDTGLAQSNLQVPSSSEPSSLKGSTSLL	
MFZ6	GRESRAGGLKERSNGSEGAPSEGRVSPKSSVPETGLIDCSTSQAASSPEPTSLKGSTSLLP	
HFZ7	-----	
MFZ7	-----	
HFZ8	-----	
MFZ8	-----	
HFZ9	-----	
MFZ9	-----	
HFZ10	-----	

HFZ1	-----	
MFZ1	-----	
HFZ2	-----	
HFZ3	-----	
MFZ3	-----	
HFZ4	-----	
MFZ4	-----	
HFZ5	-----	
HFZ6	VHPVSGVRKEQGGGCHSDT	
MFZ6	VHSASRARKEQGAGSHSDA	
HFZ7	-----	
MFZ7	-----	
HFZ8	-----	
MFZ8	-----	
HFZ9	-----	